

Ex. 6 - Personal Privacy

From: Ex. 6 - Personal Privacy
Sent: Tuesday, January 03, 2017 4:39 PM
To: 'MacKinnon, Sherry (DNR)'
Subject: RE: Shakey Lakes

Thank you very much!

From: MacKinnon, Sherry (DNR) [mailto:MacKinnonS@michigan.gov]
Sent: Tuesday, January 03, 2017 2:59 PM
To: Ex. 6 - Personal Privacy
Cc: Sexton, Karen (DNR)
Subject: Shakey Lakes

Hello Ex. 6 - Personal Privacy

Your email requesting information about the Shakey Lakes Savannah was forwarded to me from Karen Sexton.

Some basic information about the site can be found here: http://www.michigan.gov/dnr/0,4570,7-153-31154_31260-54030--,00.html

Shakey lakes contains the largest, most intact area of pine and oak barrens in northern Michigan. Similar barrens are also present in southern Michigan but the plant communities differ substantially due to the differences in latitude. The diversity of upland and wetland natural communities at Shakey Lakes is high- the site is recognized for its upland communities but has some exceptional intermittent wetlands as well.

Documented rare species at the site and their conservation status include:

Dwarf milkweed (*Asclepias ovalifolia*) State Endangered
 Vasey's rush (*Juncus vaseyi*) State Threatened
 Hill's thistle (*Cirsium hillii*) state Special concern
 Torrey's Bulrush (*Scripus torreyi*) state Special concern
 Prairie birdfoot violet (*Viola pedatifida*) State Threatened
 Bald Eagle -state Special Concern
 American Burying Beetle (record from the 1940's; species is now considered Extirpated from the state and federally Endangered)

If you have any other questions or need any clarification please don't hesitate to contact me.

Best wishes,
 Sherry

Sherry Martine MacKinnon
 Wildlife Ecologist, Planning and Adaptation Section

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Rare species occur in both of the blocks but aren't necessarily evenly distributed within them. Hill's Thistle is one of the species we would like to manage for within the natural area; its distribution in the UP is limited to Chippewa County (primarily on limestone bedrock pavement and Alvar communities) and Menominee County.

The ecosystems in the natural area include:

- Steep, sandy kames and end moraine ridges dominated by northern pin oak and red oak
- Flat sand plain dominated by a mixed forest of jack pine, red pine, red maple, paper birch, and both bigtooth and trembling aspen (most of the special plants are located here)
- Moist seasonally saturated depressions dominated by open stands of trembling aspen and jack pine
- Continually saturated (except in drought years) depressions dominated by mosses, sedges, grasses and low shrubs
- Shallow kettle lakes and ponds.

The Savannah/barrens part of the natural area would benefit from frequent low intensity prescribed fire; I believe that 2007 may have been the last time it was burned but I don't have access to those local records. The biggest issue we have with getting prescribed fire on the ground is manpower; there is a limited time where conditions are ideal for burning and lots of sites that use prescribed fire as a management tool.

The Menominee River has two endangered species of mussel called the Black Sandshell (*Ligumia recta*), and Hickorynut (*Obovaria olivaria*); a threatened species called Purple wartyback (*Cyclonaias tuberculata*), and two special concern mussels called Deertoe (*Truncilla truncate*) and Elktoe (*Alasmidonta marginata*) in the lower reaches of the river. There are also records for Lake Sturgeon (*Acipenser fulvescens*), state threatened in the menominee river from the 1980's.

When evaluating a permit for something like a mine, many things need to be taken into consideration including the presence of rare species. Fisheries division within the DNR generally would review the permit for concerns to aquatic communities; including the rare species that occur there. Wildlife division would be taking the lead on the rare plant and animal species as well as wildlife habitat in general.

I'm not sure what the impacts from a mine would be at this point in time; there was a permit to review last spring but it was pulled by the company who had an interest in the area and nothing further is out for review as far as I am aware. My concerns with the permit at that time were impacts on a population of dwarf milkweed in an upland area and Vasey's rush in wetland areas that were not regulated by DEQ.

There is great information on the species I mentioned above at this site:

<http://mnfi.anr.msu.edu/data/index.cfm>